AMENDMENTS TO THE CLAIMS

Please amend claims 9, 11, 12 and 14-19, as set forth in the following listing of claims, which will replace all prior versions, and listings, of claims in the present application.

Listing of Claims

1. (Previously Presented) A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank for storing hydrogen gas that can be discharged at a pressure of about 25 MPa;

(b) a hydrogen-occlusion alloy tank having a hydrogen-occlusion alloy accommodated therein;

(c) hydrogen-transferring means which transfers hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank; and

(d) heat-transmitting means which transmits the heat generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said hydrogen-transferring means into said hydrogen-occlusion alloy tank to the fuel cell.

2. (Original) The warming-up apparatus according to Claim 1, which further comprises a water cooling system which discharges out the heat generated at the time of the power generation in the fuel cell, and wherein said heat-transmitting means transmits the heat generated in the hydrogen-occlusion alloy to cooling water of said water cooling system to heat the fuel cell via the cooling water.

3. (Original) The warming-up apparatus according to Claim 2, wherein said heat-transmitting means is actuated when the temperature of said cooling water is not more than a prescribed temperature.

4. (Original) The warming-up apparatus according to Claim 1, which further comprises hydrogen-discharging means to discharge the hydrogen having been occluded in said hydrogen-

occlusion alloy out of the hydrogen-occlusion alloy tank in order to use the hydrogen for the power generation in the fuel cell.

5. (Original) The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the warming-up condition of the fuel cell.

6. (Original) The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the gas pressure of the anode of the fuel cell.

7. (Original) The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the hydrogen consumption amount consumed by the fuel cell.

8. (Original) The warming-up apparatus according to Claim 1, wherein the power generation in the fuel cell is started by supplying the hydrogen from the high-pressure tank after the actuation of the heat-transmitting means.

9. (Currently Amended) A process for warming-up a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises the following steps:

(A) a step for storing hydrogen from a high-pressure tank, which stores hydrogen gas at a pressure of ~~at least~~ about 25 MPa, in the hydrogen-occlusion alloy within a hydrogen-occlusion alloy tank; and

(B) a step for transmitting the heat generated at the time of storing the hydrogen in the hydrogen-occlusion alloy to the fuel cell.

10. (Original) The process according to Claim 9, which further comprises step (C) for supplying the hydrogen to the fuel cell from said high-pressure tank to generate the power after heating the fuel cell.

11. (Currently Amended) The process according to Claim 9, which further comprises step ~~(D)~~(C) for monitoring the temperature of the fuel cell, and step ~~(E)~~(D) for repeating steps (A) and (B) to heat the fuel cell, when the monitored temperature is less than a prescribed temperature, and step ~~(F)~~(E) for repeating steps (A) and (B) to heat the fuel cell and for supplying the hydrogen from said high-pressure tank to the fuel cell to start the power generation, when the monitored temperature is not less than a prescribed temperature.

12. (Currently Amended) An apparatus ~~A mechanism~~ for warming-up a fuel cell, having a configuration of warming-up the fuel cell by a heat generated during the occlusion of hydrogen in a hydrogen-occlusion alloy, wherein cooling water for cooling the fuel cell passes outside of a tank containing the hydrogen-occlusion alloy and is heated by the heat generated for warming-up the fuel cell, and wherein the ~~mechanism~~ apparatus includes a hydrogen-discharge means for discharging hydrogen having been occluded in the hydrogen-occlusion alloy and supplying the discharged hydrogen to the fuel cell as fuel.

13. (Canceled)

14. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 12, which has a configuration that when the temperature of the fuel cell is not higher than a prescribed temperature, said heat is generated to warm-up the fuel cell.

15. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 12, which has a configuration that the hydrogen having been occluded in the hydrogen-occlusion alloy is supplied to the fuel cell as fuel.

16. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 15, wherein said hydrogen is supplied to the fuel cell depending upon a target pressure of the anode of the fuel cell.

17. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 15, wherein said hydrogen is supplied to the fuel cell depending upon a target power generation for the fuel cell.

18. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 12, wherein the fuel cell starts the power generation after the warming-up.

19. (Currently Amended) The apparatus~~mechanism~~ for warming-up a fuel cell according to Claim 14, wherein the fuel cell generates power while warming-up the fuel cell when the temperature of the fuel cell is within a given temperature range, whose upper limit is said prescribed temperature, and the warming-up is performed with no power generation when the temperature of the fuel cell is under the lower limit of said given temperature range.

20. (Previously Presented) A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank for storing hydrogen gas;

(b) a hydrogen-occlusion alloy tank having a hydrogen-occlusion alloy accommodated therein;

(c) a branched pipe connecting the high-pressure tank to the hydrogen-occlusion alloy tank and the fuel cell, the branched pipe including a first branch for transferring hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank and a second branch for transferring hydrogen discharged from said high-pressure tank to the fuel cell; and

(d) heat-transmitting means which transmits heat from the hydrogen-occlusion alloy tank to the fuel cell, wherein the heat is generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said first branch of the branched pipe into said hydrogen-occlusion alloy tank.

21. (Previously Presented) A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank for storing hydrogen gas;

(b) a hydrogen-occlusion alloy tank having a hydrogen-occlusion alloy accommodated therein;

(c) a three-way valve for switching between a stationary position, in which hydrogen discharged from the high-pressure tank is directed towards the fuel cell, and a warming-up position, in which hydrogen discharged from the high-pressure tank is directed towards the hydrogen-occlusion alloy tank; and

(d) heat-transmitting means which transmits heat from the hydrogen-occlusion alloy tank to the fuel cell, wherein the heat is generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said three-way valve in said warming-up position into said hydrogen-occlusion alloy tank.

22. (Withdrawn) A warming-up apparatus for a fuel cell in an electric vehicle, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank disposed on-board the vehicle for storing hydrogen gas;

(b) a hydrogen-occlusion alloy tank disposed on-board the vehicle having a hydrogen-occlusion alloy accommodated therein;

(c) hydrogen-transferring means disposed on-board the vehicle which transfers hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank; and

(d) heat-transmitting means disposed on-board the vehicle which transmits the heat generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said hydrogen-transferring means into said hydrogen-occlusion alloy tank to the fuel cell.

23. (Withdrawn) The warming-up apparatus of claim 22, wherein the high-pressure tank and the hydrogen-occlusion alloy tank are crosswise placed on upper portions of rear wheels of the vehicle.

24. (Previously Presented) A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank formed of a fiber reinforced plastic for storing hydrogen gas;

(b) a hydrogen-occlusion alloy tank having a hydrogen-occlusion alloy accommodated therein;

(c) hydrogen-transferring means which transfers hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank; and

(d) heat-transmitting means which transmits the heat generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said hydrogen-transferring means into said hydrogen-occlusion alloy tank to the fuel cell.

25. (Previously Presented) A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank for storing hydrogen gas;

(b) a hydrogen-occlusion alloy tank formed of an aluminum alloy and having a hydrogen-occlusion alloy accommodated therein, wherein the aluminum alloy of the hydrogen-occlusion alloy tank has a higher heat conductivity than the high-pressure tank;

(c) hydrogen-transferring means which transfers hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank; and

(d) heat-transmitting means which transmits the heat generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said hydrogen-transferring means into said hydrogen-occlusion alloy tank to the fuel cell.